IN THE CLAIMS:

Claims 1-59 (Withdrawn)

60. (Original) A method of utilizing a biventricular pacing system to determine the distribution of ventricle to ventricle conduction sequences in a patient having a conductive disorder, the method comprising:

placing sensing leads in both ventricular chambers;

sensing conduction sequences occurring from one ventricular chamber to another ventricular chamber;

determining which ventricular chamber the conduction sequence originated in and which ventricular chamber it propagated to; and

recording the determining information in a memory such that the information can be used to identify the relative distribution of conduction sequences.

61. (Original) The method of claim 60, further comprising:

measuring the timing of each conductive sequence; and

including the measured timing information in the memory so that the information can also be utilized to identify relative timing information correlated to the distribution.

62. (Original) The method of claim 61, wherein each measured conductive sequence is caused to increment a counter representing one of a plurality of time ranges indicative of the timing of the conductive sequence.

63. (Original) The method of claim 61, further comprising:

pacing one ventricular chamber in order to generate a conductive sequence.

64. (Original) The method of claim 63 wherein each measured conductive sequence is caused to increment a counter representing one of a plurality of time ranges indicative of the timing of the paced conductive sequence.

Claims 65-83 (Withdrawn)

84. (Original) A biventricular pacing system for determining the distribution of ventricle to ventricle conduction sequences in a patient having a conductive disorder, comprising:

sensing means located in both ventricular chambers for sensing conduction sequences occurring from one ventricular chamber to another ventricular chamber;

means for determining which ventricular chamber the conduction sequence originated in and which ventricular chamber it propagated to; and

means for recording the determined information in a memory such that the information can be used to identify the relative distribution of conduction sequences.

85. (Original) The biventricular pacing system of claim 84, further comprising:

means for measuring the timing of each conductive sequence and including the measured timing information in the memory so that the information can also be utilized to identify relative timing information correlated to the distribution.

86. (Original) The biventricular pacing system of claim 85, wherein each measured conductive sequence is caused to increment a counter representing one of a plurality of time ranges indicative of the timing of the conductive sequence.

87. (Original) The biventricular pacing system of claim 85, further comprising:

means for pacing one ventricular chamber in order to generate a conductive sequence.

88. (Original) The biventricular pacing system of claim 87, wherein each measured conductive sequence is caused to increment a counter representing one of a plurality of time ranges indicative of the timing of the paced conductive sequence.

89. (Original) The biventricular pacing system of claim 84, further comprising:

means for delivering anti tachycardia pacing in response to the determined information.

Claims 90-104 (Withdrawn)

Please **ADD** the following new claims:

105. (New) A method of identifying a cardiac condition in a multi-chamber cardiac pacing system, comprising:

sensing conduction sequences propagating from a first chamber to a second chamber;

determining the relative distribution of the sensed conduction sequences;

identifying a conductive disorder in response to the determined relative distribution; and

adjusting a therapy delivered by the pacing system in response to the identified conductive disorder.

106. (NEW) The method of claim 105, wherein determining the relative distribution of the sensed conduction sequences includes determining which conduction sequence of the sensed conduction sequences corresponds to a dominant conduction sequence.

107. (NEW) The method of claim 106, wherein the conductive disorder identified in response to the d termined relative distribution corresponds to the determined dominant conduction sequence.

108. (NEW) The method of claim 105, wherein the first chamber corresponds to one of a right atrium, a left atrium, a right ventricle and a left ventricle, and the second chamber corresponds to one of the other of the right atrium, the left atrium, the right ventricle and the left ventricle.

109. (NEW) The method of claim 108, further comprising determining a timing of the propagation of the conduction sequences from the first chamber to the second chamber, wherein the conductive disorder is further identified in response to the determined timing.

110. (NEW) The method of claim 109, wherein determining a timing of the propagation of the conduction sequences from the first chamber to the second chamber includes determining a time range of a plurality of time ranges associated with each of the conduction sequences, and wherein the conductive disorder is further identified is response to the number of conduction sequences associated with the plurality of time ranges.

111. (NEW) The method of claim 105, wherein determining the relative distribution of the sensed conduction sequences includes determining an originating chamber associated with each of the sensed conduction sequences.

112. (New) A multi-chamber cardiac pacing system, comprising:

means for sensing conduction sequences propagating from a first chamber to a second chamber;

means for determining the relative distribution of the sensed conduction sequences;

means for identifying a conductive disorder in response to the determined relative distribution; and

means for adjusting a therapy delivered by the pacing system in response to the identified conductive disorder.

113. (NEW) The system of claim 112, wherein means for determining the relative distribution of the sensed conduction sequences includes means for determining which conduction sequence of the sensed conduction sequences corresponds to a dominant conduction sequence.

114. (NEW) The system of claim 113, wherein the conductive disorder identified in response to the determined relative distribution corresponds to the determined dominant conduction sequence.

115. (NEW) The system of claim 112, wherein the first chamber corresponds to one of a right atrium, a left atrium, a right ventricle and a left ventricle, and the second chamber corresponds to one of the other of the right atrium, the left atrium, the right ventricle and the left ventricle.

116. (NEW) The system of claim 115, further comprising means for determining a timing of the propagation of the conduction sequences from the first chamber to the second chamber, wherein the conductive disorder is further identified in response to the determined timing.

117. (NEW) The system of claim 116, wherein means for determining a timing of the propagation of the conduction sequences from the first chamber to the second chamber includes means for determining a time range of a plurality of time ranges associated with each of the conduction sequences, and wherein the conductive disorder is further identified is response to the number of conduction sequences associated with the plurality of time ranges.

118. (NEW) The system of claim 112 wherein means for determining the relative distribution of the sensed conduction sequences includes means for determining an originating chamber associated with each of the sensed conduction sequences.

119. (New) A multi-chamber cardiac pacing system, comprising:

a first sensor positioned within a first chamber of a heart and a second sensor positioned within a second chamber of the heart sensing conduction sequences propagating from the first chamber to the second chamber, the first chamber corresponding to one of a right atrium, a left atrium, a right ventricle and a left ventricle, and the second chamber corresponding to one of the other of the right atrium, the left atrium, the right ventricle and the left ventricle;

a microprocessor determining the relative distribution of the sensed conduction sequences, identifying a conductive disorder in response to the determined relative distribution, and determining a therapy in response to the identified conductive disorder; and

an output circuit outputting the determined therapy.

120. (NEW) The system of claim 119, wherein the microprocessor determines which conduction sequence of the sensed conduction sequences corresponds to a dominant conduction sequence.

121. (NEW) The system of claim 120, wherein the conductive disorder identified in response to the determined relative distribution corresponds to the determined dominant conduction sequence.

122. (NEW) The system of claim 119, wherein the microprocessor determines a timing of the propagation of the conduction sequences from the first chamber to the second chamber, wherein the conductive disorder is further identified in response to the determined timing.

123. (NEW) The system of claim 122, wherein the microprocessor determines a time range of a plurality of time ranges associated with each of the conduction sequences, and wherein the conductive disorder is further identified is response to the number of conduction sequences associated with the plurality of time ranges.

Cancelled

124. (NEW) The system of claim 119 wherein the microprocessor determines an originating chamber associated with each of the sensed conduction sequences and determines the therapy in response to the originating chamber .